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US Agency for International Development (USAID) / Pakistan
Initial Environmental Examination (IEE), Amendment No. 4
Gomal Zam Irrigation Project

Signature
7/30/2019

DCN: OAPA-19-SEP-PAK-0015

Project/Activity Data:

Activity/Project Title: Gomal Zam Dam Command Area Development project (GZD-CADP)		Solicitation #: N.A.
Contract/Award Number (if known): 391-DOA-GZDCADP-001-001		
Geographic Location: Pakistan; 391		
Originating Bureau/Office: USAID Pakistan, Office of Economic Growth and Agriculture (EGA)		
Supplemental IEE: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Amendment: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Programmatic IEE: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		DCN and date of Original document: OAPA-11-JAN-PAK-001, approved on January 11, 2011 DCN and ECD link(s) of Amendment(s): Amendment # 1 OAPA-12-APR-PAK-0023, approved on April 25, 2012; Amendment # 2 OAPA-13-JUL-PAK-0019 approved on July 18, 2013; Amendment # 3 OAPA-16-SEP-PAK-0020, approved on September 29, 2016
Funding Amount: \$102 million		Life of Project Amount: \$102 million
Implementation Start/End: January 7, 2011 to June 30, 2022		
Prepared By: Muhammad Nawaz		Date Prepared: August 01, 2019
Expiration Date (if any): June 30, 2022		Reporting due dates (if any): N.A.
Environmental Media and/or Human Health Potentially Impacted (check all that apply): None <input type="checkbox"/> Air <input checked="" type="checkbox"/> Water <input checked="" type="checkbox"/> Land <input checked="" type="checkbox"/> Biodiversity <input checked="" type="checkbox"/> Human Health <input checked="" type="checkbox"/> Other <input type="checkbox"/>		
Recommended Threshold Determination: <input checked="" type="checkbox"/> Negative Determination <input checked="" type="checkbox"/> with conditions <input checked="" type="checkbox"/> Categorical Exclusion <input checked="" type="checkbox"/> Positive Determination		<input type="checkbox"/> Deferral <input type="checkbox"/> Exemption <input type="checkbox"/> USG Domestic NEPA action

Climate Change: <input checked="" type="checkbox"/> GCC/Adaption <input type="checkbox"/> GCC/Mitigation <input checked="" type="checkbox"/> Climate Change Vulnerability Analysis (included) Adaptation/Mitigation Measures: Included for new activities

**US Agency for International Development (USAID) / Pakistan
Initial Environmental Examination (IEE), Amendment No. 4
Gomal Zam Irrigation Project**

SUMMARY OF FINDINGS:

1.0 Background and Project/Activity Description

1.1 Purpose and Scope of IEE

The purpose of this Initial Environmental Examination Amendment Number 4 of the IEE: OAPA-11-JAN-PAK-001 is to:

- a) Extend the Life of Project (LOP) of the Gomal Zam Irrigation Project to June 30, 2022;
- b) Add the A&E services (\$2 million) activity to support the GZD-CADP; and
- c) Increase in the funding level from \$100 million to \$102 million.

This IEE Amendment, in accordance with 22 CFR 216, provides a review of the reasonably foreseeable effects on environment, and recommends decisions of Threshold Determinations for the new activity under the Project. This Amendment provides a brief statement of the factual basis for a Threshold Decision and recommends Requests for Categorical Exclusion (RCE) for the new Project activity. The scope and nature of all previously approved activities remain the same. All previously approved threshold determinations, conditions, limitations, and stipulations for revision remain in force.

1.2 Background

Gomal Zam Irrigation Project has three main components: 1) Irrigation; 2) Waran Canal, and 3) Gomal Zam Dam Command Area Development (GZD-CADP). The irrigation system component was completed in 2016 while work on Waran Canal is near completion. The GZD-CADP is 14% complete. This IEE amendment is related to component 3, which is briefly described below.

The GZD-CADP is the last phase of USAID's Gomal Zam Dam Multi-purpose Project. The GZD-CADP is located in the D. I. Khan and Tank districts of Khyber Pakhtunkhwa (KP). The overall objective of the project is to efficiently and productively irrigate 191,000 acres of agricultural land. The main components of the GZD-CADP include: the establishment of an efficient on-farm water management system with water users as operators; the enhancement of farmers' crop and livestock productivity and processing; and the support of effective post-harvest marketing of crop and livestock products. The GZD-CADP will create new jobs, new businesses, and increase economic opportunities for the local communities. An estimated 30,000 families, or approximately 195,000 people, will benefit directly from GZD-CADP.

On May 6, 2019, The Government of Khyber Pakhtunkhwa (GoKP) Secretary of the Agriculture Department requested that USAID extend the GZD-CADP project to June 30, 2022. The main reason for the extension, according to GoKP, is delayed construction of the Waran Canal. A significant amount of work under GZD-CADP (38%) is dependent on the Waran Canal, which while planned to be completed by 2017 is now expected to be completed by December 2019. The slow progress on Waran Canal led to delay in the construction of the 148 tertiary irrigation canals under GZD-CADP. GZD-CADP was also delayed due to the security situation in D.I.Khan and Tank districts. The Government of Pakistan has been conducting military operations in Tank District for the last three years, which hampered project activities significantly. Frequent incidences of kidnapping and killing make project area highly dangerous

for project staff to work freely in the field. Last but not the least, the lengthy procurement process of GoKP has led to delays in project implementation as well.

1.3 Update Status:

Currently, only 50 out of 393 planned tertiary irrigation water channels under GZD-CADP have been completed. Without the completed irrigation channels, work on enhancing agriculture productivity, training of farmers, and establishing processing and marketing value chains has yet to be started. Halcrow provides monitoring and verification services for the GZD-CADP. After each site visit, Halcrow submits to USAID a report and payment certificate, which includes a section on Environmental Mitigation and Monitoring Plan (EMMP) compliance.

1.4 A&E Monitoring and Verification Services for GZD-CADP (\$2 million)

The GZD-CADP is situated in the border region of South Waziristan – a highly insecure region that is difficult for staff to travel to. Accordingly, USAID/Pakistan engages a third party monitoring and evaluation support and financial assistance to work with the implementing partner. USAID contracted with Halcrow in February 2016 to provide monitoring and verification services for the Gomal Zam Irrigation Project, Waran Canal and GZD-CADP and ensure compliance with the activity agreement and the project implementation letters, assess quality, and verify work done and compliance with the Environmental Management and Monitoring Plan. The Task Order for Halcrow is scheduled to end on December 31, 2019.

In order to continue with monitoring and verification services for GZD-CADP, USAID plans to procure a new contract with an A&E firm. The life for this new contract will remain the same as that of the GZD-CADP for which the A&E services are required. The Total Estimated Cost (TEC) for the new A&E contract is \$2 million, with initial funding of \$646,723. The new A&E activity is expected to start on January 1, 2020 and end on September 30, 2021.

2.0 Environmental Lessons Learned from the On-Going USAID Funded GZD-CADP

Infrastructure interventions make up about 70% of the GZD-CADP cost (specifically, construction of tertiary irrigation water channels) while the remaining 30% is reserved for building capacity of farmers for agricultural productivity, processing and marketing. The infrastructure activities have potential environmental impacts and are prone to failure if proper design and environmental monitoring and mitigation measures are not in place. For GZD-CADP, an Environmental Documentation Form (EDF), including an EMMP was completed in October 2014 by AA Associates, a consulting firm hired by USAID, and duly approved by WAPDA and the Mission Environmental Officer (MEO) in November 2014. This EMMP was part of the Activity Agreement with the Government of Pakistan. Technical staff from AA Associates provided training to project staff of GZD-CADP on the EDF/EMMP from October 29-30, 2014 to ensure compliance with the EMMP during project implementation. A separate firm, HALCROW, was hired on February 1, 2016 by the Mission to provide monitoring of compliance with the EMMP conditions.

As the GZD-CADP is being implemented through a Government-to-Government (G2G) mechanism, the Project Implementation Management Unit (PIU) is comprised of public sector officials. Due to frequent turnover of project staff and lack of adequate capacity in monitoring and record keeping, environmental monitoring and reporting became a challenge. The Mission continued building capacity of the PIU in

environmental monitoring and reporting through the environmental specialist of Halcrow and frequent meetings and correspondence with USAID Mission Environmental Officer and the GZD-CADP AOR. The Mission ensured environmental compliance through third party certificate for each payment from A&E firm (Halcrow). Although USAID verified compliance through monitoring and verification services provided by an independent firm, it did not fully plan for the low capacity of host government project staff. One important consideration is to include trained environmental professionals in the Project Implementation Unit and to include this as a mandatory clause in future G2G agreements. This could be done either by skilled environmental staff from the market, through technical assistance from USAID, or recruiting/redeploying qualified personnel from GOP departments. On the advice of the AOR, the PIU assigned a qualified professional of the GZD-CADP consultant (NESPAK) as a full-time environmental manager to be responsible for ensuring EMMP compliance. In addition, GOP environmental staff should be involved right from the project design stage (the GOP PC-1 process) through project implementation to ensure proper EMMP implementation.

The Mission while designing new G2G projects or activities or amending existing activities, will ensure inclusion of environmental experts right from the PC-1 design phase through to the implementation stage to avoid non-compliance or inadequate environmental compliance.

In addition, the COR/MEO/Deputy MEO may seek to visit the area to observe implementation first hand and also review whether the activity is using pesticides, which may require special attention to water aspects, particularly if used for drinking purposes.

3.0 Country Environmental Information

This section of the original IEE; OAPA-11-JAN-PAK-001, approved on January 11, 2011, remains unchanged.

4.0 Legislative and Regulatory Framework

This section of the original IEE; OAPA-11-JAN-PAK-001, approved on January 11, 2011, remains unchanged.

5.0 Climate Change Integration

This section of the original IEE; OAPA-11-JAN-PAK-001, approved on January 11, 2011, remains unchanged. The CRM for the new A&E activity has been approved on August 6, 2019.

5.1 USAID Climate Risk Management Requirements

This section of the original IEE; OAPA-11-JAN-PAK-001, approved on January 11, 2011, remains unchanged. The CRM for the new A&E activity has been approved on August 6, 2019.

5.2 Project Activities and Recommended Climate Risk Management Actions:

This section of the original IEE; OAPA-11-JAN-PAK-001, approved on January 11, 2011, remains unchanged.

6.0 Program Activities and Recommended Threshold Decisions & Mitigation Actions (Including Monitoring and Evaluation)

This IEE satisfies the conditions of the environmental procedures for activities and the delegation of environmental review responsibility to Missions. The recommended threshold decision for the existing activities in the original IEE; OAPA-11-JAN-PAK-001, approved on January 11, 2011, remains

unchanged since this action is only extending the IEE for the same activity which is not changing in scope.

The Environmental Threshold Determinations for the new A&E activity is recommended below.

6.1 Recommended Threshold Decisions for New Activity” Architect & Engineering (A&E) Services for Gomal Zam Dam Command Area Development Project in Khyber Pakhtunkhwa” (\$2 million):

6.1.1 Categorical Exclusion as per 22 CFR 216.2. (c)(i), (iii) and (v);

It is recommended for the following interventions as these do not have an effect on the natural or physical environment:

1. Review, Monitoring and verification of engineering/construction activities, design reviews/vetting, and EMMP compliance for GZD-CADP

These services will include but are not limited to the following:

- Review of mapping and layout of the watercourses, earthen link roads, ponds and High Efficiency Irrigation systems (Furrow, drip, sprinkler etc.).
- Review of detailed designs, specification and cost estimates for watercourse, earthen link roads, ponds, high efficiency irrigation system, reclamation and land leveling of the command area, farm and field layout, culverts, sand filters, tunnel farming etc.
- Review of any changes in the design, cost estimates and specification of any component of the project.
- Monitoring and verification of all the construction components as required or as requested by the TOCOR including watercourses construction and allied works, earthen link roads, ponds, land levelling/land formation of fields for efficient irrigation, drainage works (if any), high efficiency irrigation system, siltation and other related works.
- Monitoring and verification of the environmental compliance as per EMMPs and other USAID/GOP/GoKP/requirements.
- Monitoring, verification/certification of deliverables/payments requests from GZD-CADP for USAID under various Project Implementation Letters with GOP/GOKP departments as required.

2. Monitoring and verification of non-engineering activities under GZD-CADP project

- The monitoring and verification of the non-engineering activities under GZD-CADP project will include, but is not limited to, the following activities:
- Formation and registration of Water Users’ Associations (WUAs) on about 400 watercourses, one for each watercourse, Terms of Partnership and training.
- Formation of 18 Farmers Organization (one each on 18 distribution canals) and Area Water Board
- Water distribution system (*Warabandi*) and role of WUAs and Farmer Organizations (FOs) to implement and enforce equitable water distribution.
- Training of farmers/WUAs in cropping pattern, cropping intensity, crop and horticulture production, productivity, water use and productivity, processing, profitability and marketing, and livestock value chain.
- Private sector engagement for input supply, production technologies, processing and marketing.
- Policy and enabling environment to increase crop, horticulture and livestock production, water management and economic growth.

Environmental Review Instructions and forms will be used, wherever needed, to confirm this determination for each activity. Implementers will follow best industry practices for Environmentally Sound Design and Management and all USAID funded trainings for the project will include appropriate environmental considerations.

6.1.2 Negative Determination with Conditions as per 22 CFR 216.3(a)(2)(i),

This section of the original IEE; OAPA-11-JAN-PAK-001, approved on January 11, 2011, remains unchanged.

6.1.3 Positive Threshold Decision per 22CFR216.3 (a)(2)(iii) (\$144.29 Million /95%):

This section of the original IEE; OAPA-11-JAN-PAK-001, approved on January 11, 2011, remains unchanged.

6.2 Other Conditions

6.2.1 Conditions for USAID Project Manager Responsibility

This section of the original IEE; OAPA-11-JAN-PAK-001, approved on January 11, 2011, remains unchanged.

6.2.2 Conditions for Implementing Partner Responsibility

This section of the original IEE; OAPA-11-JAN-PAK-001, approved on January 11, 2011, remains unchanged.

6.3 Summary Table for the new activity as described in section 1.4:

Activities	Effects on natural or physical environment	Determination and Regulation 216 action required
Categorical Exclusion		
<ul style="list-style-type: none"> Review of mapping and layout of the watercourses, earthen link roads, ponds and High Efficiency Irrigation systems (Furrow, drip, sprinkler etc.). Review of detailed designs, specifications and cost estimates for watercourse, earthen link roads, ponds, high efficiency irrigation system, reclamation and land leveling of the command area, farm and field layout, culverts, sand filters, tunnel farming etc. Review of any changes in the design, cost estimates and specification of any component of the project. Monitoring and verification of all the construction components as required or as requested by the TOCOR including watercourses construction and allied works, earthen link roads, ponds, land levelling/land formation of fields for efficient irrigation, drainage works (if any), high efficiency irrigation system, siltation and other related works. Monitoring and verification of the environmental compliance as per EMMPs and other 	No adverse effect on the natural or physical environment.	Categorical Exclusion per 22 CFR 216.2(c)(1)(i)

<p>USAID/GOP/GoKP/requirements.</p> <ul style="list-style-type: none"> • Monitoring, verification/certification of deliverables/payments requests from GZD-CADP for USAID under various Project Implementation Letters with GOP/GoKP departments as required. • The monitoring and verification of the non-engineering activities under GZD-CADP project will include, but is not limited to, the following activities: • Formation and registration of Water Users' Associations (WUAs) on about 400 watercourses, one for each watercourse, Terms of Partnership and training. • Formation of 18 Farmers Organization (one each on 18 distribution canals) and Area Water Board • Water distribution system (<i>Warabandi</i>) and role of WUAs and Farmer Organizations (FOs) to implement and enforce equitable water distribution. • Training of farmers/WUAs in cropping pattern, cropping intensity, crop and horticulture production, productivity, water use and productivity, processing, profitability and marketing, and livestock value chain. • Private sector engagement for input supply, production technologies, processing and marketing • Policy and enabling environment to increase crop, horticulture and livestock production, water management and economic growth. 		
Negative Determination (Not Applicable)		
Positive Determination (Not Applicable)		

4.6 Use of Pesticides

This section of the original IEE; OAPA-11-JAN-PAK-001, remains unchanged and is applicable to all activities under this IEE.

7.0 MITIGATION, MONITORING AND EVALUATION

This section of the original IEE; OAPA-11-JAN-PAK-001, remains unchanged and is applicable to all activities under this IEE.

8.0 ALLOCATION, TRAINING AND REPORTING REQUIREMENTS

This section of the original IEE; OAPA-11-JAN-PAK-001, remains unchanged and is applicable to all activities under this IEE.

9.0 LIMITATIONS OF THE IEE

This section of the original IEE; OAPA-11-JAN-PAK-001, remains unchanged and is applicable to all activities under this IEE.

10.0 REVISIONS

In accordance with 22 CFR 216.3(a)(9), if a project is revised or new information becomes available, including during preparation of an EDF, which indicates that a proposed action might be "major" and its effects "significant," the Determination will be reviewed and revised by the originator(s) of the program and projects and submitted through the MEO to the Bureau Environmental Officer in OAPA for approval. If warranted, an environmental assessment will be launched and a scoping statement and environmental assessment report prepared. The scoping and EA process, if determined necessary during scoping, will follow and comply with 22 CFR 216.3(a)(4). It is the responsibility of the COR/AOR to inform the MEO and BEO-OAPA of any changes in the scope and nature of approved activities, which may warrant the revision of the approved threshold decisions, in a timely manner.

CLEARANCE / APPROVAL OF ENVIRONMENTAL ACTION RECOMMENDED:

CLEARANCE:

EGA Office Director: cleared Date: 08/01/2019
(Acting) Malick Haidara

Mission Environmental Officer: cleared Date: 8/5/2019
and Climate Integration Lead Mohsin Rose
(Acting)

Regional Environmental Advisor: cleared Date: 8/10/2019
Central, South Asia, and OAPA Andrei Barannik

OPM Office Director: T.H. Date: 9/24/19
(Acting) Timothy Hurley

Deputy Mission Director: Clay Epperson Date: 9/25/19
Clay Epperson

APPROVAL:
Mission Director: Julie Koenen Date: 9/26/19
Julie Koenen

CONCURRENCE:

Bureau Environmental Officer - OAPA: Christopher Payne Date: 9/30/19
Christopher Payne

Distribution: 1) Project files; 2) Mission IEE Database; 3) OAA; 4) RLO

Draft Gomal Zam Project IEE Amendment 4

Andrei Barannik <abarannik@usaid.gov>

To: Mohsin Rose <marose@usaid.gov>

Cc: "Asim Aziz (USAID/Pak/PRM)" <aaiz@usaid.gov>

Sat, Aug 10, 2019 at 7:40 AM

Mohsin - reviewed - looks OK - I'd suggest to beef-up a little bit environmental compliance lessons learnt section, particularly suggesting that COR/MEO/DMEO may seek to visit the area to observe implementation first hand and also review whether pesticides are being used in project's activities or in the area, which may require special attention to water aspects, particularly if used for drinking purposes. With these, I clear. Please send clean Mission approved Amnd in Word and pdf to Chris Payne, BEO/OAPA for his review and concurrence W/r, Andrei

P.S. Pls note that I'm on local TDY site visits with no internet - mark your e-mails URGENT as warranted.

P.S.S. Please start planning for my TDY end of October - November

[Quoted text hidden]

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Andrei D. Barannik

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